Approved For Release 2004/02/10 : CIA-RDP80-00809A000600010059-2

CLASSIFICATION SECRET SECRET

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

[redacted]

25X1

COUNTRY Hungary

SUBJECT 1. Soviet Aircraft Preservation Methods
2. Aircraft Fuels, Lubricants and Fluids

25X1 [redacted]

DATE DISTR. 24 Aug 51

NO. OF PAGES 2

NO. OF ENCLS. (LISTED BELOW)

SUPPLEMENT TO REPORT NO.

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES, WITHIN THE MEANING OF TITLE 18, SECTIONS 793 AND 794, OF THE U.S. CODE, AS AMENDED. ITS TRANSMISSION OR REVELATION OF ITS CONTENTS TO OR RECEIPT BY AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. THE REPRODUCTION OF THIS FORM IS PROHIBITED.

THIS IS UNEVALUATED INFORMATION

25X1 [redacted]

25X1

1. The preservation procedure on the Yak-9 (VK-107A engine) aircraft was as follows. The first step was draining the 95 octane gasoline from the tanks and the engine and replacing it with 72 octane. The oil, if used two hours, was drained and replaced with fresh. The engine was then run at 1600 R.P.M. for five minutes. After the engine is stopped, and in order to relieve the tension on its springs, the blower is put in second degree. The cooling liquid is drained, battery removed and the whole aircraft is cleaned with kerosene and carefully inspected for defects which have to be corrected prior to storage. All unpainted parts of the aircraft, including the engine, are covered with a thin layer of rust preventive compound (K V. Soviet type, brown in color, non-odorous and of high viscosity). Next, the spark-plugs are removed and the cylinders sprayed with warm oil (T. 40°C, M.S. Low viscosity type, 150 grams per cylinder). The spark plugs are then placed and the propeller rotated six to seven times. The cylinders, whose piston heads are in the lower part, are sprayed again with 150 grams of warm oil. The exhaust outlets are also sprayed with warm oil (T. 40°C, 100 grams per each outlet) covered with metal caps to prevent oil from seeping out. During winter, when the aircraft is stored outdoors, the landing wheels, with tires, are put on wooden boards. All rubber parts, including the tires, are covered with talcum powder to prevent cracking. The engine section and cockpit are covered with a tarpaulin and in order to discourage unauthorized tampering is secured with a lead seal by the crew chief. The movable surfaces are secured with wooden blocks. Every ten days the propeller is rotated ten times. Every two weeks the aircraft is moved slightly to change the position of the tires. Every thirty days the excess oil was drained from the cylinders by rotating the propeller; cooling liquid was added and the engine, with the blower in first degree position was run for five minutes at 1600 R.P.M. Every ninety days the aircraft is test flown for thirty minutes. The regiments engineering officer personally has to inspect and release the aircraft for this flight. Upon the pilot's report that the aircraft is in good condition, the preservation procedure is repeated. In event the aircraft is not in perfect flying condition, it cannot be returned to storage status until the defects have been corrected.

2. The preservation procedure for the Yak-11 (ASH-21 radial, 7 cyls. engine) aircraft is the same as for the Yak-9 with the exception that the engine is run for five minutes at 1200 R.P.M. instead of 1600 R.P.M. This aircraft uses 87 octane gasoline, which is replaced with 72 octane gasoline while in storage status. The complete preservation procedure on the Yak-9 aircraft is usually completed by two men in eight hours, on Yak-11 aircraft by two men in six hours. The Yak-9 can be returned to flying status by two men on six hours, the Yak-11 in four hours.

CLASSIFICATION SECRET SECRET

				DISTRIBUTION			
STATE	X	NAVY	X				
ARMY	X	AIR EV	X	AEC	X	FBI	X

FORM NO. 51-4D JAN 1951

(20)

Approved For Release 2004/02/10 : CIA-RDP80-00809A000600010059-2

Approved For Release 2004/02/10 : CIA-RDP80-00809A000600010059-2

25X

3. The following types of gasoline octane ratings were used by the Hungarian Air Force aircraft.

OCTANE RATING	ENGINE	AIRCRAFT
95	VK-107A AM-42	YAK-9 IL-10 LI-2 (DS-3)
87	ASH-21 Argus Walther Minor	YAK-11 ARADO-96 SLIN
72	M-11D	UT-2

The 95 octane gasoline was of dark-red color and had a faint garlic-like odor. The 87 octane gasoline was both of light-blue and light-red color, also with a faint garlic-like odor. The 72 octane gasoline was not colored and had ordinary gasoline odor. Lead tetraethyl is added to ordinary gasoline in order to increase the octane rating.

4. I do not know how long gasoline can be stored without deteriorating, however, every ninety days, samples of gasoline were taken to laboratories in Budapest for testing. All fuel used by Hungarian Air Force was of Soviet origin. I have no information on jet fuels.

5. The following Soviet types of oil were used in the Hungarian Air Force: MK for summer use, which lost its viscosity when heated to T. 120°C; MS for summer use, which lost its viscosity when heated to T.95° - 100°C. MZS was used for winter. The type of grease used was KV (Soviet produced) of light brown color.

6. A transparent "Hydraulic oil" was used on the Arado-96 landing gear retracting system. The fluid used in the shock absorber units was a mixture of glycerin (70%) and alcohol (30%). No anti-icer installations were available on Hungarian Air Force aircraft. The engine coolant fluid used on the Yak-9 and IL-10 aircraft was composed of water in which some kind of violet colored powder called "Krompik" was dissolved. Proportions were 5 grams powder to 72 liters water.

-end-

Approved For Release 2004/02/10 : CIA-RDP80-00809A000600010059-2